

## Addition Strategies

Learning Goal: Add numbers mentally

### Strategy 1 - Adding left to right or Front-end addition

- Add each digit to the other digit in the same place value

$$\begin{array}{r} 3421 + 5578 \\ \hline \end{array}$$

So:

I know that:

$$3 + 5 = 8$$

$$4 + 5 = 9$$

$$2 + 7 = 9$$

$$1 + 8 = 9$$

$$3000 + 5000 = 8000$$

$$400 + 500 = 900$$

$$20 + 70 = 90$$

$$1 + 8 = 9$$

$$8999$$

- Is more challenging if you need to regroup.

$$59 + 73 =$$

$$5 + 7 = 12$$

$$9 + 3 = 12$$

The answer is not  
1 212 because:

$$50 + 70 = 120$$

$$9 + 3 = 12$$

$$132$$

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### Strategy 2 - Friendly numbers

- Look at the numbers that we can change to near numbers that we can add easily, "nice numbers".
- Look for numbers that are close to place value benchmarks (10s, 100s, 1000s)

$$184 + 299$$

I know 299 is 1 less than 300. 300 is easier to add.

$$299 + 184$$

Add 1

Subtract 1

You need to **balance out** the numbers when you are adding friendly numbers.

$$300 + 183 = 483$$

$$\text{So } 299 + 184 = 483$$

It is easier to add numbers that end in zero.

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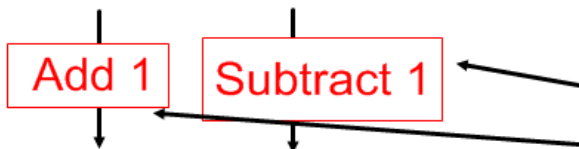
### Strategy 2 - Friendly numbers

- Look at the numbers that we can change to near numbers that we can add easily, "nice numbers".
- Look for numbers that are close to place value benchmarks (10s, 100s, 1000s)

$$184 + 299$$

I know 299 is 1 less than 300. 300 is easier to add.

$$299 + 184$$



You need to **balance out** the numbers when you are adding friendly numbers.

$$300 + 183 = 483$$

$$\text{So } 229 + 184 = 483$$

It is easier to add numbers that end in zero.

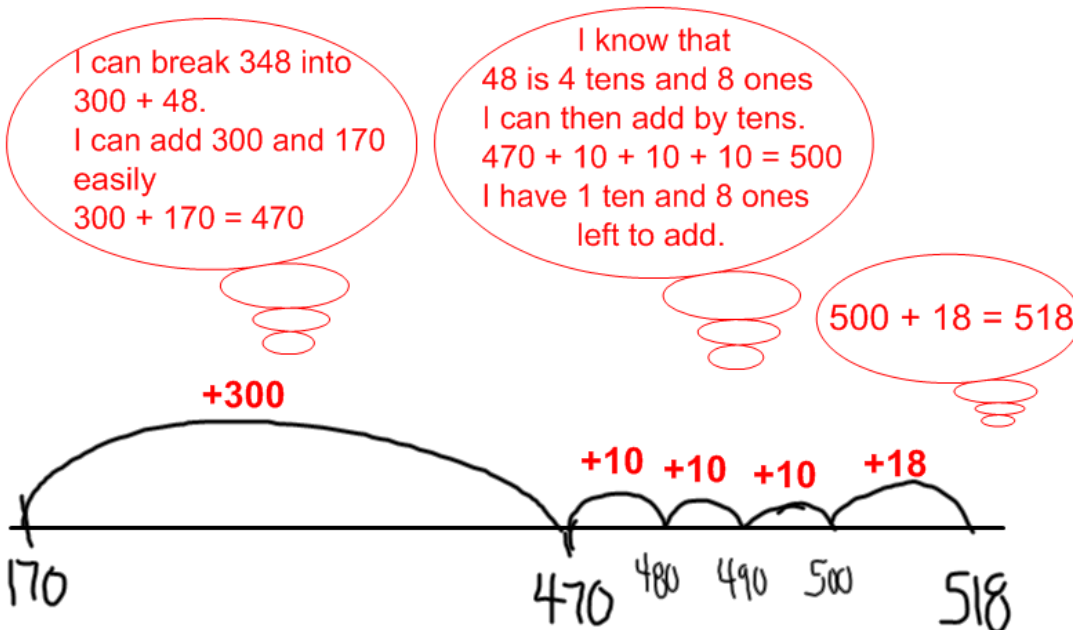
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### Strategy 3 - Counting On

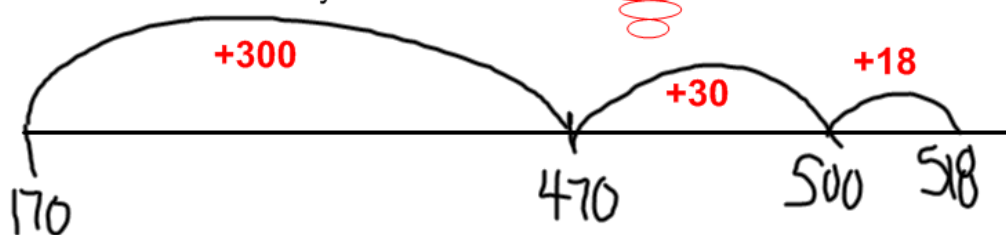
- Use a mental number line to add the numbers. ***You can draw the number line to help you remember each part.***
- Works well with numbers that have digits that need to be regrouped

$$170 + 348$$



- You can break the addends into any way you find easiest.

I.e. A more efficient way



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### **Strategy 3 - Counting On - STEPS**

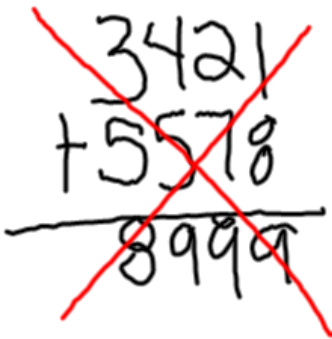
1. We break up the smaller addend into easier numbers to add.
2. Put the bigger number on the number line. Then you have fewer jumps to make.
3. "Jump" the easier numbers.
4. Where we end on the line is our sum.

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### Explaining your mental addition strategies

$$3\ 421 + 5\ 578$$



A handwritten vertical addition problem showing 3421 plus 5578. The numbers are aligned by place value, with a horizontal line under the second number. The sum, 8999, is written below the line. A large red 'X' is drawn over the entire calculation.

If the question asks for mental math, adding vertically is **not** a mental math strategy.

You will get one mark for the right answer but will lose one or two marks for not showing and explaining the mental math strategy.